

PHASE-CHANGE MEMORY DEVICES WITH A SELF-HEATER STRUCTURE

Abstract of the Disclosure

5 Phase change memory devices include a phase-change memory layer on a semiconductor substrate. The phase-change memory layer has a major axis that is substantially parallel to a major axis of the semiconductor substrate and has a first surface and a second surface opposite the first surface that are substantially parallel to the major axis of the phase-change memory layer. A first electrode is provided on the
10 semiconductor substrate that is electrically connected to the first surface of the phase-change memory layer in a first contact region of the phase-change memory layer. A second electrode is provided on the semiconductor substrate that is electrically connected to the phase-change memory layer in a second contact region of the phase-change memory layer. The second contact region is space apart from the first contact
15 region.